

## NEW COLLEMBOLA FROM NORTH CAROLINA.

BY D. L. WRAY, Raleigh, N. C.

In preparing a list of the insects of the Order Collembola occurring in this region many collections have come to my attention and this paper will describe some of the new forms thus found. Four new species are described, three belonging to the Suborder Arthropleona, and one to the Suborder Symphyleona.

The new species are:—*Achorutes jondavi*, n. sp., *Xenylla carolinensis*, n. sp., *Entomobrya beaucatcheri*, n. sp., *Ptenothrix pineolae*, n. sp.

## FAMILY PODURIDAE.

Genus *Achorutes* Templeton.*Achorutes jondavi*, n. sp. (Figs. 1-7)

Length up to 1.6 mm. Body with yellow background sprinkled with reddish-rust colored specks which are heavier on head and antennae. Antennal joint 4 heavily rust colored all over. Underparts of body and head lighter, sparsely specked. Rust spot between eyes. Antennae shorter than the head. Relative length of antennal joints as 2.5:2.5:3:4. Sense organ of third antennal segment consists of two small, slightly bent sense rods (Fig. 1). Eyes eight on each side. Eye patch black with 3 stout spines. Post-antennal organ consists of 4 tubercles, the anterior ones are elongate-oval, the posterior ones somewhat triangular in shape (Fig. 2). Unguis long, slender, slightly curving, with well developed tooth near the middle of the inner margin. Unguiculus extending half as far as unguis with a well rounded basal lamella, the apical half ending in an acuminate spine (Fig. 3). One long, simple curving tenent hair. Rami of tenaculum 4-toothed. Dentes twice as long as mucrones. On the dorsal surface of each dens are 7 setae, the proximal one being the longer, the inner 4 setae slightly winged. Mucro somewhat slipper-shaped with a tuberculate outer lamella bearing a prominent obtuse angle (Fig. 4). Anal horns two-thirds length of hind unguis, stout, slightly curving, separated basally. Clothing of rather long, curving setae becoming abundant posteriorly. In outline one long, curving, and 2 to 3 shorter setae to each segment.

*A. jondavi* is closely allied to *A. bengtssoni* Agren (1940, p. 2) but does not have the apically swollen dentes. The latter species is olive brown with short anal horns. Also *A. jondavi* differs from

this species in shape of post-antennal organ, lamellate unguiculus, well-developed inner tooth on unguis, difference in shape of mucro, and size of anal horns.

This species is close to *A. californica* Bacon but differs in shape of mucro, post-antennal organ, anal horns, and other characters.

*Locality:* This species was found abundant in fungi on a rotten log in Bloomsbury Park, Raleigh, N. C., Dec. 9, 1943, by D. L. Wray and C. S. Brimley. Described from some 30 cotypes.

FAMILY PODURIDAE.

Genus *Xenylla* Tullberg.

*Xenylla carolinensis*, n. sp. (Figs. 8-16)

Length up to 0.5 mm. General background color yellowish-white with blue to faint purplish pigment evenly distributed over body in the form of semicircular spots. Venter, legs, furcula, and segmental sutures lighter. Antennae shorter than head or as 13:20; third and fourth segments but feebly demarcated, the fourth bearing many bristles, and apical retractile sense club, three dorsal large bent sense rods, two laterally, one dorsally and back from the apex is long, curving reaching over tip of antenna (Fig. 14). Organ of third segment of two short sense rods behind fold. Eyes (Fig. 8) five on each side. Unguiculus absent. Unguis (Fig. 13) minutely tuberculate, rather straight, untoothed. Tenent hairs two. Furcula short not extending to apex of abdomen. Dens with mucro as 4:3, clearly demarcated (Fig. 12). Dens with two curving hairs subequal to mucro in length. Mucro (Fig. 12) with a large external lamella which appears finely tuberculate, and reaches all the way to the strongly turned-up apex of mucro and folds in middle giving impression that mucro is bent in middle. Anal horns two, small almost straight, on basal papillae which are almost as long (Fig. 11). Clothing (Fig. 9) of short curving hairs on head and body. On the legs the hairs are straighter and become longer apically. On the last two abdominal segments the hairs are much longer and curve backwards (Fig. 10). There are dorsally two rows of long, curving hairs on fifth abdominal segment. One long hair on outside of each anal horn and one in between (Fig. 11). These hairs appear feebly enlarged at apex.

*Locality:* Six miles east of Raleigh, N. C., under dead leaves in cavity under dead stump on banks of Neuse river, May 5: eight specimens (M. W. Wing, collector).

This species is close to *X. welchi* Fols. in the shape of mucro and lamella and to *X. baconae* Fols. in shape of unguis.

FAMILY ENTOMOBRYIDAE.  
Genus *Entomobrya* Rondani.

***Entomobrya beaucatcheri*, n. sp.**

Length 0.75 mm. Ground color yellow-white, pigment blue to purple on the following parts. Antennal joints 1 and 2 light blue, heavier at apices, 3 and 4 more heavily blue pigmented. Head with scattered light blue pigment throughout, a pigmented line connects eyespots along anterior edge of head. Eye patches irregular and black. Dorsum of thorax and abdominal segments 1, 2, and 3 heavily mottled with blue to purple pigment forming a very distinct broad band over this entire region. Abdominal segment 4 yellow-white, some specimens may show a very faint trace of bluish pigment scattered over the segment. Coxae heavy blue. Other parts of legs gray to yellow. Furcula yellow throughout (Fig. 24). Eyes (Fig. 23) eight on each side in an irregular patch, inner two ocelli smaller than rest. Antennae slightly longer than head or as 75:90. Relative lengths of the antennal segments as 12:19:17:40. Fourth abdominal segment 5 times the length of the third. Unguis nearly straight with one outer and 2 pairs of inner teeth. Unguiculus narrow, unarmed, lanceolate, about three-fourths length of unguis (Fig. 25). The fringed hairs on end of tibio-tarsus vary in length, some reaching tip of unguiculus.

Manubrium to dentes as 58:70. Dentes with dorsal crenulations ending 4 times the length of mucro from distal end. Mucro (Fig. 26) as usual in shape, with apical and antepical tooth, and basal spine; the distal tooth curved more than usual. Antennae, head, and body with many curving fringed hairs, those on legs as long as those on manubrium and dentes. Dentes with usual long fringed setae dorsally, shorter ones ventrally.

This species is one of the smallest *Entomobrya* that I have come in contact with either in collecting or in literature.

*Locality:* Collected from leaf mould on Beaucatcher Mt., near Asheville, N. C., September 10, 1944 (D. L. Wray, collector).

FAMILY SMINTHURIDAE.  
Genus *Ptenothrix* Börner.

*Ptenothrix pineolae*, n. sp.

Length up to 1.5 mm. General ground color yellow. With four broad deep purplish-black bands on dorsum as follows: a band on head crosses vertex, including eye patches, and reaches down sides of the head to lower edge of cheeks; a broad band covers anterior half of body and reaches almost to coxae, leaving a dorsal irregular yellow patch; a narrower band crosses abdominal segments 3 and 4; a ventro-lateral purple patch on middle of body; the ano-genital segment is covered by a purplish-black band dorsally and laterally. Legs, manubrium, and first two antennal joints faint purple; last two antennal joints dark purple; eye patch dark. Venter yellow. The pattern of the purple bands varies slightly in different individuals (Figs. 17 & 20). Eyes eight on each side. Antennae longer than head or as 80:35; antennae to body as 80:64. Relative length of antennal points as 6:29:35:10. Antennal joint 3 with 6 annulations in apical half; 4 with 4 distinct joints and 7 to 8 whorls of hairs (Figs. 17 & 18). Unguis (Fig. 22) with 2 inner well-defined teeth and 2 lateral teeth on each side. Unguiculus (Fig. 22) with a basal spine and a long curving subapical bristle which exceeds the length of the unguis. Manubrium to dens to mucro as 10:22:8. Dens with 2 rows of dorsal bristles most of which are serrate, and with four dorsal long, outstanding pinnate hairs; ventrally with 1 short basal hair, 4 median and 2 outer long appressed hairs distally. Mucro (Fig. 21) with both dorsal margins roundly toothed.

Clothing of head consists of short spine-like setae anteriorly and much longer setae posteriorly. The hairs on dorsum of body are long spine-like anteriorly becoming much shorter posteriorly; then very long and spine-like on ano-genital segment. Bothriotricha 3 on each side. There are 2 stout, bilaterally serrate setae on the posterior surface of each posterior tibio-tarsus. Anal appendages of female are bristle-like, slightly curving.

*Locality:* This species was taken from humus and leaf-mould under hemlock trees near Linville River, Pineola, N. C., June 26, 1943 (D. L. Wray, collector).

Cotypes of the new species described herein are in the author's collection. I wish to express my sincere thanks and appreciation to

Dr. Harlow B. Mills, Montana State College, Bozeman, Montana, for his generous help and suggestions, and for examining most of these forms.

#### EXPLANATION OF PLATES.

PLATE I. *Achorutes jondavi*, n. sp. FIG. 1. Right antenna. 2. Left eye patch and post-antennal organ. 3. Right hind foot. 4. Tenaculum. 5. Left dens-mucro. 6. Anal horn. 7. Integument. *Xenylla carolinensis*, n. sp. 8. Left eye patch. 9. Integument. 10. Hairs and integument of anal region. 11. Anal horns. 12. Dens-mucro. 13. Hind foot. 14. Antenna. 15. Fourth antennal segment. 16. Type of pigmentation spots.

PLATE II. *Ptenothrix pineolae*, n. sp. FIG. 17. *P. pineolae*, n. sp. 18. Antenna. 19. Third antennal organ. 20. Dorsal view. 21. Dens-mucro. 22. Hind foot. *Entomobrya beau-catcheri*, n. sp. 23. Right eye patch. 24. Lateral view. 25. Hind foot. 26. Dens-mucro.

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### HOW TO BECOME AN ENTOMOLOGIST.

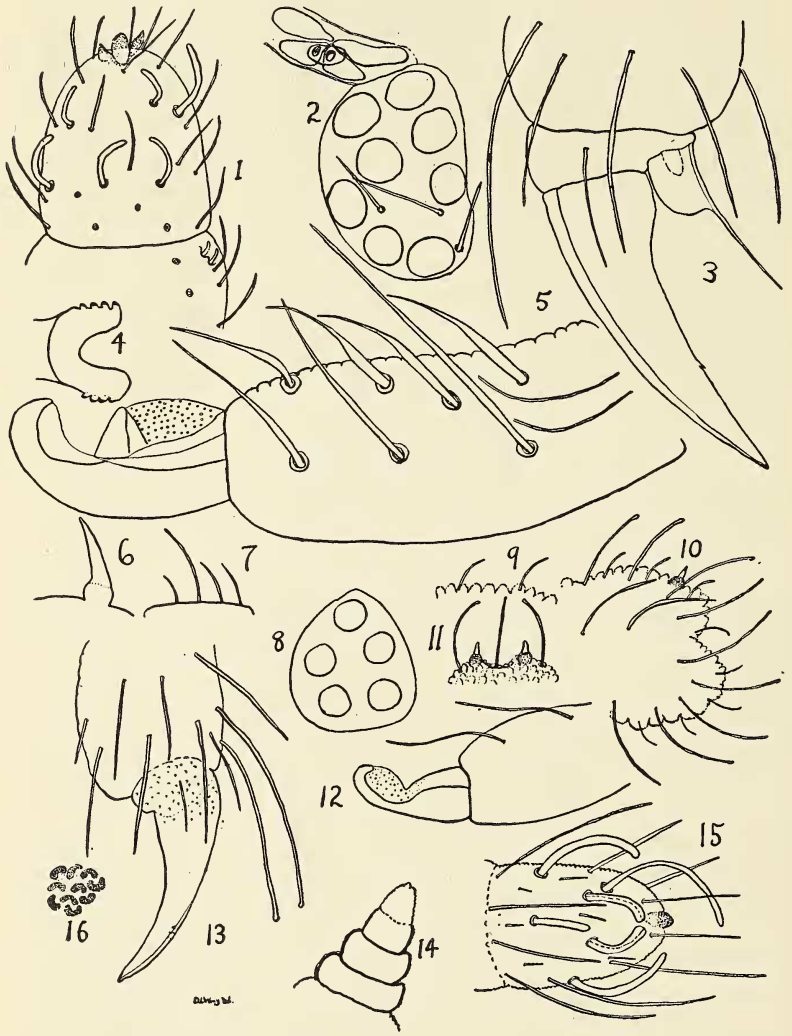
Oh, to name a species  
Now that spring is here.  
And who would name a species  
Would leave his name for 'ere.

Proclaim the tarsi "longer"!  
Confuse the setal hair.  
Declare the palpi "darker."  
A muddled key, prepare.

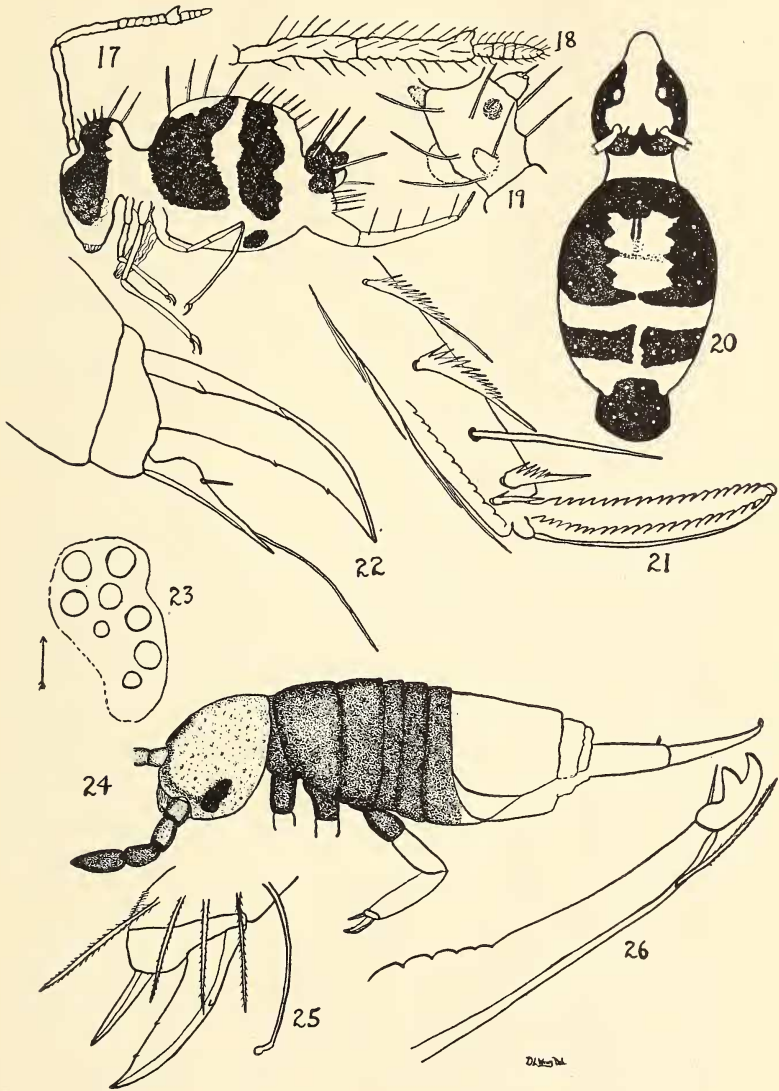
So, go you! Name your species.  
Describe in verbiage prim,  
From cerci to antennae  
This holotype so trim.

Go, you, name the species,  
If taxonomy's your whim.  
However it is published, it's  
Another synonym. . . .

ALBRO T. GAUL,  
Brooklyn, N. Y.



D. G. S. W.



**MECIDEA MINOR, A NEW SPECIES OF PENTATOMID FROM NEW MEXICO.**

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Up to the present writing, hemipterologists have recognized only one North American species belonging to the pentatomid tribe Mecidiini. That species is *Mecidea longula* Stål, described in 1854. Recently, while sorting pentatomids, collected during various trips to the Rocky Mountain states since 1932, a number of specimens of the genus *Mecidea* were found which differ from the accepted description of *M. longula* in so many respects that there can be no doubt that they represent a new and an additional species of the genus. Due to their smaller size and paler color, when compared with *M. longula*, the specific name **minor** has been given them. In some respects the specimens show relationship to the African species *M. pallida* Stål, but again differ in their smaller size.

For sake of comparison both *M. longula* and *M. minor* are here-with described.

*Mecidea longula* Stål

Form narrowly elliptical, color testaceous to gray yellow with fuscous lineations usually forming four longitudinal bands through the thorax, the two middle ones continuous onto the scutellum; fuscous markings, when present on venter, in form of bands near lateral margins of thorax and abdomen; head about one-third longer than wide through eyes; juga longer than tylus, usually divergent at apex so that the tip of the head is narrowly truncate; a preapical sinus is usually present and its lateral margins are not parallel (Fig. A); pronotum more than half again as wide as long through median line, sometimes almost twice as wide; its surface coarsely punctate, somewhat transversely rugose; a median impunctate carina obsolescent or wanting; canal of the metasternal orifice attenuated into a tapering, slightly arcuate ridge, extending three-quarters or more across the metasternal plate; the black spot diagonally behind each spiracle prominent, as big as or bigger than the spiracle, an impressed transverse bar in front of each spot granulated and prominent; the abdominal striae coarse and easily recognizable; lower lip of male genital cup somewhat upturned, its edge forming a shallow U-shaped border, sometimes with a pair of opposing blunt denticles at the base of the U (Fig. B); the upturned portion of the cup shallowly impressed